Aquatic Species Biological Assessment for Livestock Grazing on the Horse Creek Allotment

LOST RIVER RANGER DISTRICT

SALMON-CHALLIS NATIONAL FOREST

BUTTE COUNTY, IDAHO

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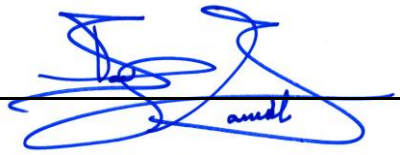
Signature: 

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1 INTRODUCTION

The Lost River Ranger District of the Salmon-Challis National Forest authorizes livestock grazing activities within the Horse Creek Allotment. This biological assessment describes the proposed action and discusses the probable impacts of that action on listed species and proposed critical habitat that may be affected. This biological assessment forms the basis for any necessary consultation with the Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) (collectively the "Services") pursuant to section 7 of the Endangered Species Act (ESA) of 1973 (as amended) and its implementing regulations. This biological assessment replaces all previous consultations associated with this allotment. The regulations for consultation require the action agency to re-initiate consultation if certain triggers are met (50 CFR 402.16). Occasionally during the implementation of a proposed action, changes in circumstances, situations, or information can raise the question as to whether those re-initiation thresholds have been reached. Should that situation occur, the Salmon-Challis National Forest (SCNF) will assess the changes and any potential impacts to listed species, review the re-initiation triggers, coordinate with Services for advice (if needed), and arrive at a determination whether re-initiation of consultation is necessary.

2 BACKGROUND INFORMATION

The Hose Creek Allotment is entirely within the Little Lost River-Badger Creek 5th Field HUC (5th Field HUC: 1704021703). Elevations in this sub-watershed range from 5,655 feet at the confluence of Badger Creek and the Little Lost River to 12,197 feet at the summit of Diamond Peak. The geology of the sub-watershed is primarily sedimentary rock and alluvium. The physiography of the sub-watershed includes high relief mountains and associated canyons, alluvial fans, and floodplains. The primary vegetation types are sagebrush steppe, coniferous forests, deciduous riparian communities, coniferous riparian, sub-alpine, and alpine communities. The sub-watershed has both streams that exhibit a snowmelt dominated stream flow pattern where peak flows typically occur in early summer and low flows occur during the winter months and streams that exhibit a spring fed stream flow pattern that have relatively stable flows throughout the year. The sub-watershed is primarily managed by the Forest Service and Bureau of Land Management with lesser amounts of state and private land. Significant management actions within the sub-watershed have included agriculture activities, stream alteration, stream diversion, livestock grazing, timber harvest, mining, road construction, fire suppression, the introduction of non-native fish, and recreation.

3 PROPOSED ACTION

3.1 PROJECT AREA

The Horse Creek Allotment is an 11,351 acre allotment located north of the town of Howe in the Little Lost River basin (Figures 1 and 2). The allotment is entirely within the Little Lost River-Badger Creek 5th Field HUC (5th Field HUC: 1704021703) (Figure 3).

3.2 PROPOSED ACTION

3.2.1 CURRENT PERMIT

The grazing permit for this allotment is permit #40086 which expires on December 31, 2010.

3.2.2 GRAZING SYSTEM

Grazing on this allotment will involve grazing up to 6 cow/calf pairs on a portion of the allotment under an on/off grazing system with grazing occurring anytime between May 16 and September 10. The allotment consists of the Badger Creek and Horse Creek units. Grazing will occur only within the Horse Creek Unit (1,652 acres) and no grazing will occur within the Badger Creek Unit (9,699 acres). The Badger Creek

Unit is not being grazed to help protect and restore the small, isolated bull trout population that occupies Badger Creek and Bunting Canyon Creek.

Entry: Livestock enter the allotment from an adjacent BLM allotment.

Exit: Livestock exit the allotment to an adjacent BLM allotment.

3.2.3 RESOURCE OBJECTIVES

Resource Objectives and Effectiveness Monitoring: The allotment is being managed to achieve specific resource conditions in riparian areas. Resource objectives are the Forest's description of the desired land, plant, and water resources condition within riparian areas in the allotment. Some resource objectives are Riparian Management Objectives (RMOs) that were implemented as part of the Inland Native Fish Strategy (INFISH) and the consultation associated with INFISH. INFISH is a strategy implemented by the USDA Forest Service in 1995 that was "…intended to provide interim direction to protect habitat and populations of resident native fish outside of anadromous fish habitat in eastern Oregon, Idaho , western Montana, and portions of Nevada" (USDA Forest Service 1995). INFISH provides riparian management objectives, standards and guidelines, and monitoring requirements. INFISH amended the Challis National Forest plan and applies to those national forest lands in the Big Lost River and Little Lost River basins.

Effectiveness monitoring for resource objectives will be monitored every five to ten years at Designated Monitoring Areas (DMAs) using the Multiple Indicator Monitoring (MIM) technical reference or other best available science as it becomes available. DMAs are areas representative of grazing use specific to the riparian area being accessed and reflect what is happening in the overall riparian area as a result of on-the-ground management actions. They should reflect typical livestock use where they enter and use vegetation in riparian areas immediately adjacent to the stream (Burton et al 2008). Results from monitoring will be available at (http://www.fs.fed.us/r4/sc/projects/range/index.shtml).

The resource objectives area as follows:

Greenline Successional Status: A greenline successional status value of at least 61 (late seral) or the current value, whichever is greatest (see Winward 2000).

Woody Species Regeneration: Sufficient woody recruitment to develop and maintain healthy woody plant populations.

Bank Stability (INFISH): A bank stability of at least 90%[1] or the current value, whichever is greatest.

Water Temperature (INFISH): No measurable increase in maximum water temperature.[2] Maximum water temperatures below 59°F (15°C) within adult holding habitat and below 48°F (8.9°C) within spawning and rearing habitats.

Width:Depth Ratio (INFISH): <10 or by channel type as follows[3]:

A Channel: 21

B Channel: 27

C Channel: 28

Sediment (INFISH): <20% surface fines (substrate <0.25 inches (6.4 mm) in diameter) in spawning habitat or <30% cobble embeddedness in rearing habitat.[4]

[1] The INFISH environmental assessment established a riparian management objective for bank stability of 80%. However, during consultation this standard was increased to 90% within bull trout priority watersheds. This allotment is within a priority watershed.

[2] In this case, maximum water temperature is expressed as the 7-day moving average of daily maximum temperature measured as the average of the maximum daily temperature of the warmest consecutive 7-day period

[3] These values are based on the mean values observed for streams in natural condition within the Salmon River (Overton et al 1995)

3.2.4 MANGEMENT STANDARDS AND GUIDELINES

The following are forest plan standards and guidelines that applies to the management of livestock grazing relative to listed fish and their habitats:

INFISH

GM-1: Modify grazing practices (e.g., accessibility of riparian areas to livestock, length of grazing season, stocking levels, timing of grazing, etc.) that retard or prevent attainment of Riparian Management Objectives or are likely to adversely affect inland native fish. Suspend grazing if adjusting practices is not effective in meeting Riparian Management Objectives.

The INFISH environmental assessment defines "Adverse Effects" to include "…short- or long-term, direct or indirect management-related impacts of an individual or cumulative nature, such as mortality, reduced growth, or other adverse physiological changes; harassment of fish; physical disturbance of redds; reduced reproduction success; delayed or premature migration; or other adverse behavioral changes."

GM-2: Locate new livestock handling and/or management facilities outside of Riparian Habitat Conservation Areas. For existing livestock handling facilities inside the Riparian Habitat Conservation Areas, assure that facilities do not prevent attainment of Riparian Management Objectives. Relocate or close facilities where these objectives cannot be met.

GM-3: Limit livestock trailing, bedding, watering, salting, loading, and other handling efforts to those areas and times that would not retard or prevent attainment of Riparian Management Objectives or adversely affect inland native fish.

Land Resource Management Plan for the Challis National Forest – Forest Wide Direction

- Protect anadromous fish spawning areas from disturbance by livestock and other activities.
- Utilize grazing systems on allotments which provide for deferment or rest whenever possible. Season-long grazing or common use will be allowed only where resources can sustain such use.
- Range improvements will be maintained annually by permittees to standards adequate for public safety and established use, and control and proper distribution of livestock. Maintenance will be completed before livestock are allowed on the allotment.
- Rehabilitate existing stock driveways where damage is occurring. Relocate them outside riparian areas if possible.
- Browse utilization within the riparian ecosystem will not exceed 50 percent of new leader production.
- Ensure that all management-induced activities meet State water quality standards, and Forest water quality goals, including sediment constraints.
- Impacts of activities may not increase fine sediment by depth (within critical reaches) of perennial streams by more than 2 percent over existing levels. Where existing levels are at 30% or above new activities that would create additional stream sedimentation would not be allowed. If these levels are reached or exceeded, activities that are contributing sediment will be evaluated and appropriate action will be taken to bring fine sediment within threshold levels.
- Retain at a minimum, 75 percent of natural stream shade provided by woody vegetation.
- Establish forage utilization at levels which will yield 90% inherent bank stability or trends toward 90% where streams or other water bodies are involved.
- Discourage livestock concentrations in riparian areas and within 100 feet of lakes and perennial streams. Restrict livestock grazing in identified problem areas where necessary.
- Livestock driveways and trailing areas will be located away from riparian or streamside areas.

[4] The INFISH environmental assessment did not include a riparian management objective for sediment. However, during consultation a riparian management objective for sediment was established in bull trout spawning and rearing areas within bull trout priority watersheds. This allotment is within a priority watershed.

Land Resource Management Plan for the Challis National Forest – Management Area Specific Direction

- Manage for improved conditions on riparian areas. Emphasize Deep, Badger, and Uncle Ike Creeks.

3.2.5 USE INDICATORS

Annual use indicators are used to ensure that grazing does not prevent the attainment of the resource objectives. Riparian annual use indicators used on the Salmon-Challis National Forest generally include greenline stubble height, bank alteration, and woody browse. In general, greenline stubble height is used to regulate grazing impacts on greenline ecological status, bank alteration is used to regulate grazing impacts on bank stability, and woody browse is used to regulate impacts on woody recruitment. The specific indicators selected for a specific unit should be those that correspond with the riparian resources that are most sensitive to the impacts of livestock grazing. For example, if bank stability was the riparian feature most likely to be impacted by livestock grazing in a unit, then bank alteration would be selected as the annual use indicator for that unit.

The previous biological assessment for this allotment established a set of indicators for this allotment. The current proposed action maintains the median greenline stubble height and woody browse indicators for the Horse Creek Unit that were established in the previous biological assessment (Table 1). The current proposed action eliminates the previous bank alteration indicator in the Horse Creek Unit because bull trout are not present in that unit. Since livestock are not grazing within the Badger Creek Unit indicators are not needed for that unit.

TABLE 1. THE ANNUAL USE INDICATORS.

Unit	End of Season Indicators			
	Median Greenline Stubble Height	**Bank Alteration**	**Woody Browse**	**Upland Utilization**
Horse Creek (M121)	≥ 6 inches	none	≤ 35%	≤ 50%
Badger Creek (M119, M120)	not grazed	not grazed	not grazed	not grazed

3.3 IMPROVEMENTS

Existing Improvements: The allotment contains only one improvement (Figure 2). This is a fence located at the Forest boundary on Badger Creek which prevents livestock from moving into the Badger Creek Unit from the adjacent BLM allotment. This fence will be maintained in accordance with the term grazing permit.

New Improvements: No improvements are proposed as part of this consultation.

3.4 CHANGES FROM EXISTION MANAGEMENT

The proposed action includes the following changes from existing management:

- Stubble height: Within the Horse Creek Unit, the indicator for stubble height are not changing from the existing values
- Bank alteration: Within the Horse Creek Unit, the bank alteration indicator of 10% is being eliminated because bull trout do not occur in that unit
- Woody browse: Within the Horse Creek Unit, the indicator for stubble height are not changing from the existing values

- In about 2000, livestock grazing was discontinued in the Badger Creek Unit in order to protect and restore bull trout populations in Badger Creek and Bunting Canyon Creek. This action is being incorporated into this biological assessment.
- Use indicators are being eliminated in the Badger Creek Unit because this unit will no longer be grazed
- The use of herbicides is being eliminated in the Badger Creek Unit

3.5 CONSERVATION MEASURES

The following conservation measures will be implemented as part of the proposed action and incorporated into the term grazing permits to avoid and reduce potential impacts to ESA listed fish:

- Livestock will not graze in the Badger Creek Unit in order to protect and restore bull trout populations in Badger Creek and Bunting Canyon Creek
- The use of herbicides is being eliminated in the Badger Creek Unit

3.6 MONITROING

Implementation and effectives monitoring will be conducted at designated monitoring areas (DMA's). Each DMA will be located in an area that is representative of grazing use and reflect what is happening in the overall riparian area as a result of grazing activity. The DMA should reflect typical livestock use where they enter and use vegetation in riparian areas immediately adjacent to the stream. Monitoring at the DMA will be completed using the MIM Interagency Technical Bulletin (Burton et al. 2008) or other best available science. Results from monitoring will be available at (http://www.fs.fed.us/r4/sc/projects/range/index.shtml).

Implementation Monitoring: The only implementation monitoring on this allotment required by this biological assessment will consist of at least an annual inspection to ensure that livestock are not grazing within the Badger Creek Unit.

Effectiveness Monitoring: The condition of the resource objectives will be evaluated in the following manner. Within the Badger Creek Unit, greenline successional status, bank stability, and woody recruitment will be monitored at the DMA's every five to ten years to evaluate changes in resource conditions associated with the elimination of livestock grazing in that unit. Sediment and temperature may also be monitored at established long-term monitoring sites within the Badger Creek Unit every five to ten years. These sites are established long-term monitoring sites are not necessarily located at the DMA's.

3.7 INTERDEPENDENT ACTIONS

Interdependent actions are actions that have "no independent utility apart from the action under consideration" (50 CFR§402.02). The Forest has not identified any interdependent actions associated with the proposed action. There are activities associated with the proposed action that could potentially affect fish and could be considered interdependent actions. These include livestock grazing on the adjacent BLM allotment, grazing and other agriculture activities on private property that is owned by the permittees and diverting water from streams on private and national forest lands for agricultural purposes. However, we believe that these activities would continue to occur in a manner similar to the way they are currently occurring whether or not livestock graze on this allotment. Therefore, these activities will not be considered as interdependent actions.

3.8 INTERRELATED ACTIONS

Interrelated actions are actions that "are part of a larger action and depend on the larger action for their justification" (50 CFR§402.02). The Forest has not identified any interrelated actions associated with the proposed action.

4 ESA ACTION AREA DESCRIPTION

The ESA action area is defined as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action” (50 CFR§402.02). This is the area where the action and any interdependent and interrelated actions will result in direct or indirect affects to listed species or designated critical habitat. Our analysis indicates that the proposed action has the potential to generate direct or indirect affects to aquatic species and aquatic habitats in that portion of the allotment within the Horse Creek Unit (Figure 2). Therefore, the action area is the area covered by the Horse Creek Unit. The elimination of livestock grazing in the Badger Creek Unit precludes livestock grazing from impacting aquatic species and aquatic habitats in that unit. Therefore, the Badger Creek Unit is not part of the action area.

Bull trout priority watersheds are those watersheds that were identified as part of INFISH that are particularly important to bull trout. The consultation associated with INFISH requires a different management strategy within these areas because of their importance to bull trout. The entire allotment and action area are within a bull trout priority watershed (Figure 3).

5 LISTED SPECIES REVIEW

5.1 SPECIES OCCURRENCE

The current semi-annual Species List issued by the U.S. Fish and Wildlife Service (List #14420-2010-SL-0089, issued December 30, 2009) indicates that one ESA listed fish species occurs on the Lost River Ranger District. This is:

- Bull trout (Threatened) (Federal Register 63FR31647)

Although bull trout are present on the allotment they are not found in the action area. Bull trout are present in the Badger Creek Unit where they are found in Badger Creek and Bunting Canyon Creek (Gamett 1999; Garren et al. 2008; Lost River Ranger District, unpublished data) (Figure 4). Bull trout are not present in the Horse Creek Unit. Therefore, bull trout are not present in the action area.

5.2 CRITICAL HABITAT

Critical Habitat was designated for bull trout on September 26, 2005 (Federal Register 70FR56212). The USFWS published a public notice in 2010 (Federal Register 75FR2270) that is proposing to revise the designated critical habitat. The allotment does not contain any currently designated critical habitat. The allotment does contain proposed critical habitat in the Badger Creek Unit. Specifically, Badger Creek and Bunting Canyon Creek have been proposed as bull trout critical habitat. However, there is no proposed critical habitat within the Horse Lake Unit. Therefore, there is not proposed bull trout critical habitat present in the action area.

6 EFFECTS DETERMINATION

The lack of bull trout, designated bull trout critical habitat, and proposed bull trout critical habitat within the action area precludes the proposed action from having direct, indirect, or cumulative effects on bull trout, designated bull trout critical habitat, or proposed bull trout critical habitat. Therefore, the proposed action results in a “NO EFFECT” determination for bull trout and a “NO EFFECT” determine for proposed bull trout critical habitat (Table 2)

TABLE 2. EFFECTS DETERMINATION SUMMARY.

	Chinook Salmon		**Steelhead**		**Bull Trout**	
	Species	Designated Critical Habitat	Species	Designated Critical Habitat	Species	Designated Critical Habitat
Determination	na	na	na	na	No Effect	No Effect

FIGURE 1 – HORSE CREEK ALLOTMENT VICINITY MAP.

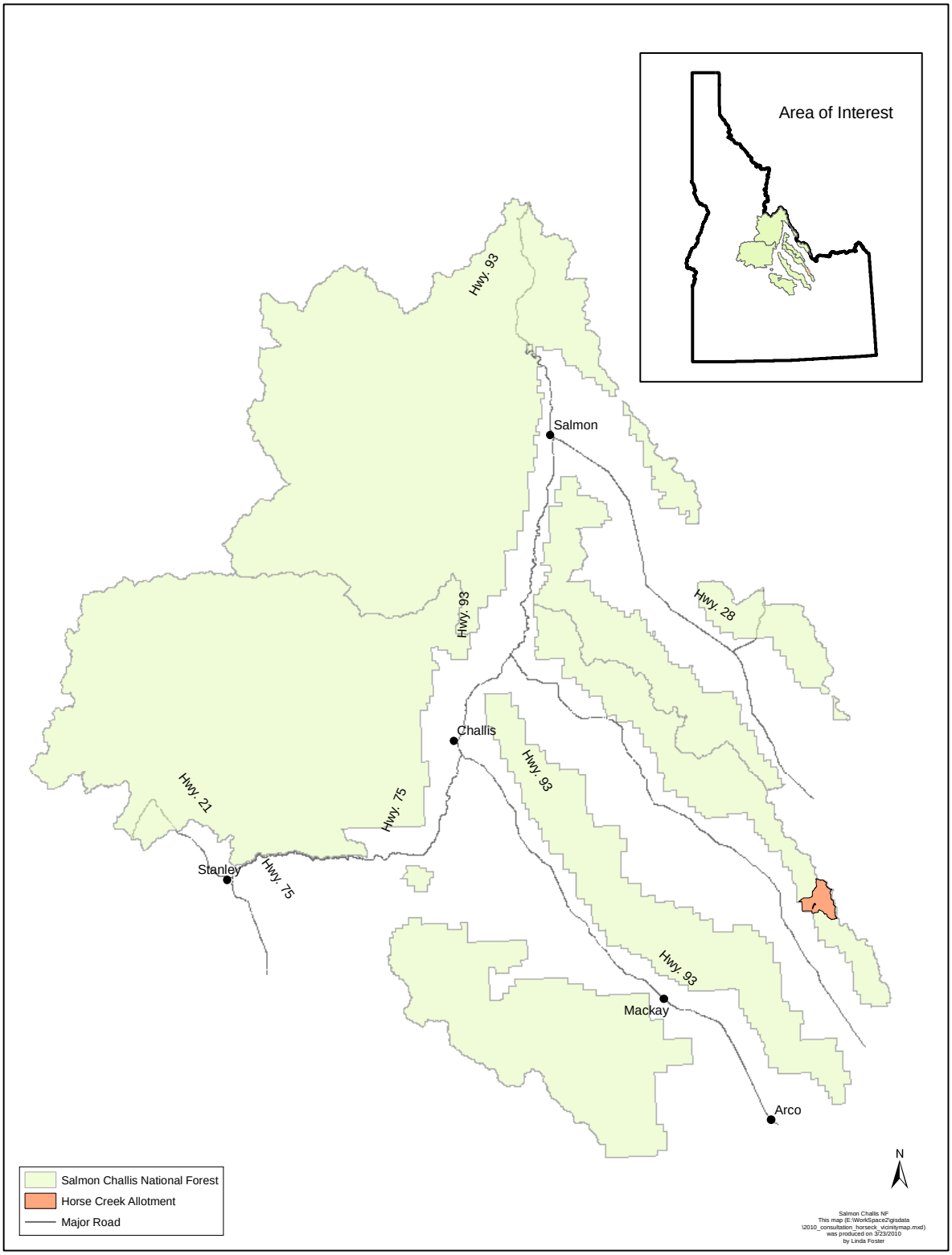


FIGURE 2 – HORSE CREEK ACTION AREA.

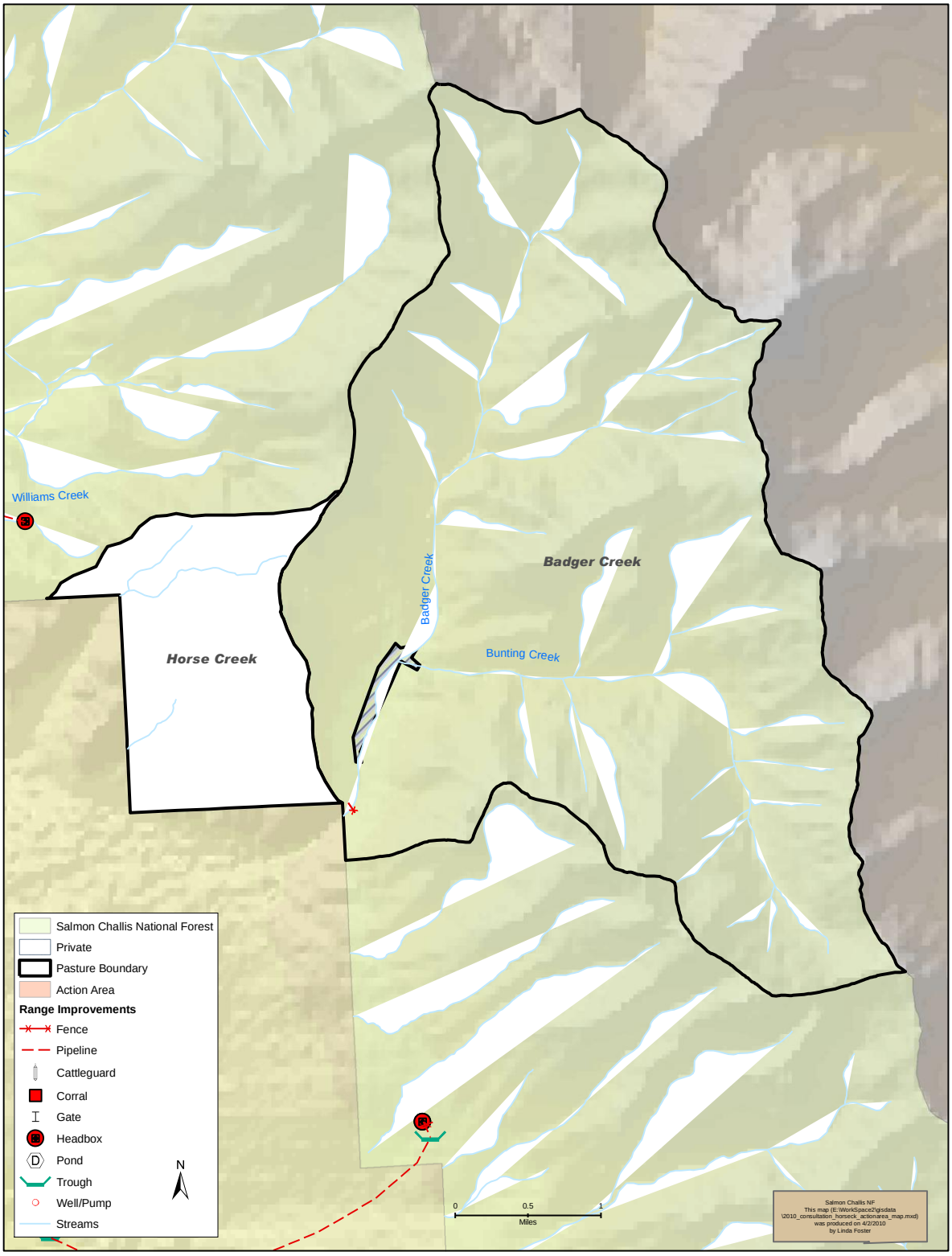


FIGURE 3 – HORSE CREEK HUCS AND PRIORITY WATERSHEDS.

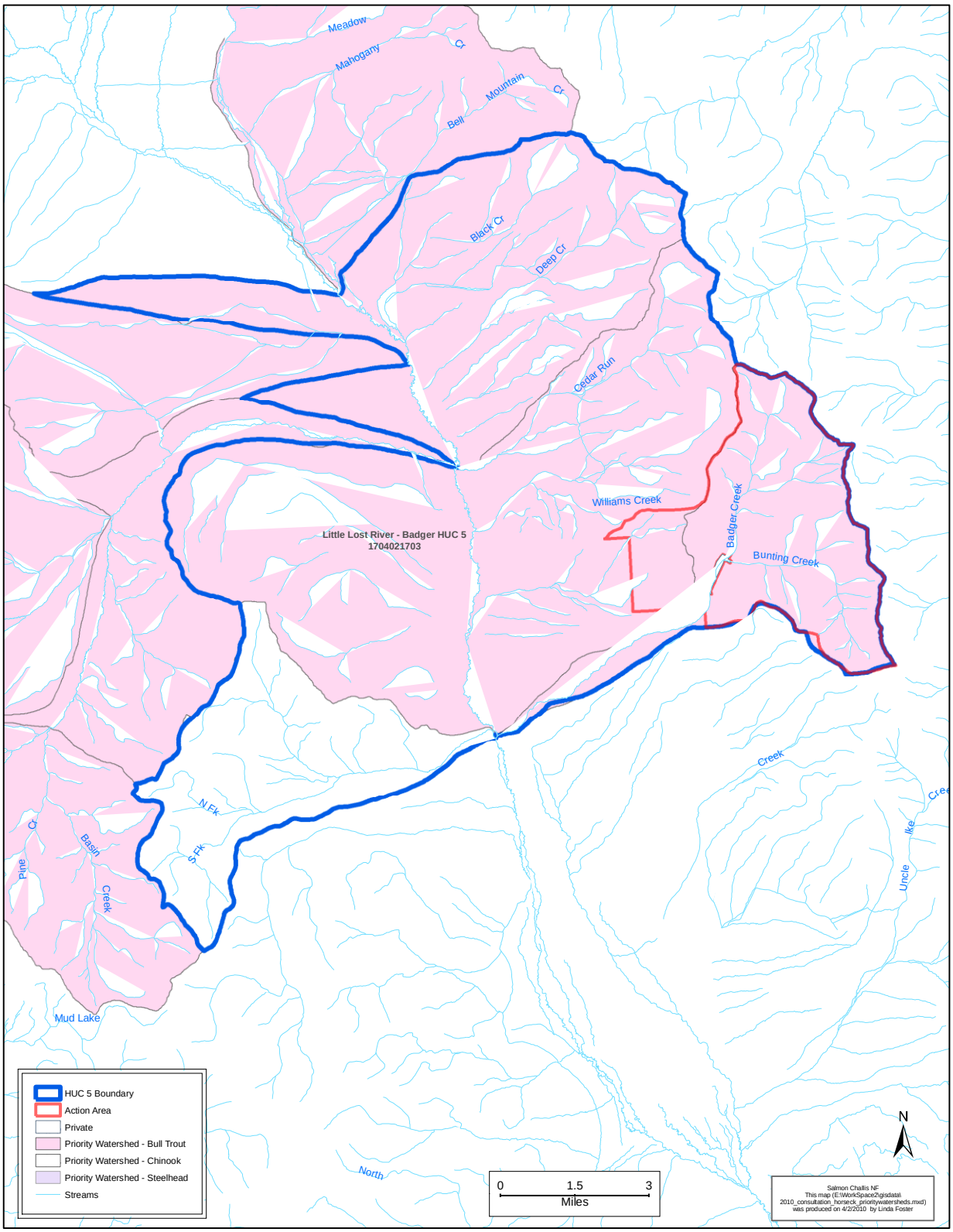
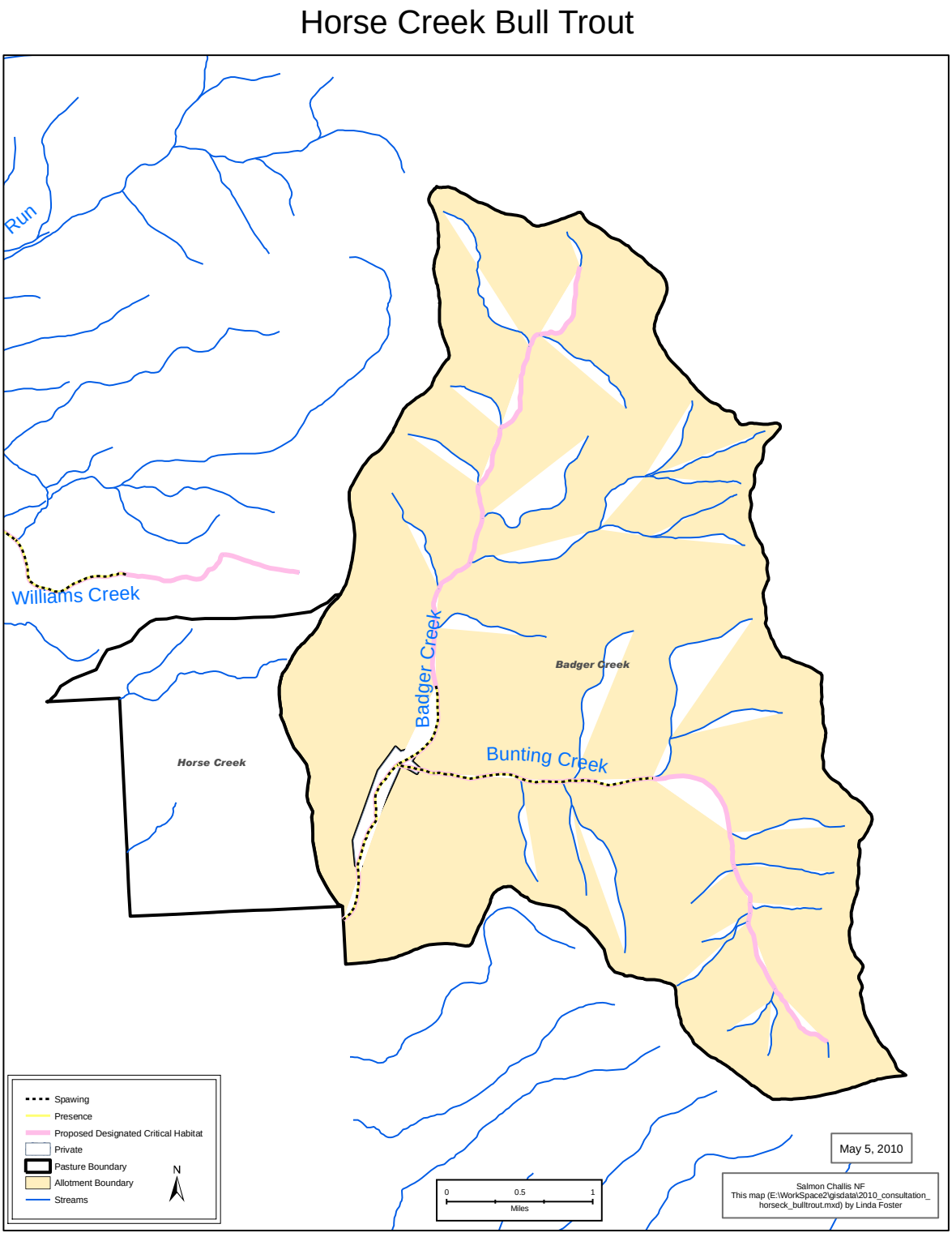


FIGURE 4 – BULL TROUT OCCURRENCE, SPAWNING, AND PROPOSED CRITICAL HABITAT



APPENDIX A - REFERENCES

Burton, T.A., S.J. Smith and E.R. Crowley. 2008. Monitoring stream channels and riparian vegetation multiple indicators. Interagency Technical Bulletin Version 5.0. USDA Forest Service, USDI Bureau of Land Management. April,2008.

Gamett, B.L., 1999. The history and status of fishes in the Little Lost River drainage, Idaho. Salmon-Challis National Forest, Mackay, Idaho.

Garren, D., W.C. Schrader, D. Keen, J. Fredericks. 2008. Fishery management annual report Upper Snake Region 2008. IDFG 08-102. Idaho Department of Fish and Game, Boise, Idaho.

USDA Forest Service. 1995. Inland native fish strategy environmental assessment, decision notice and finding of no significant impact. USDA Forest Service, Washington, D.C.

Winward, A.H. 2000. Monitoring the vegetation resources in riparian areas. USDA Forest Service. Rocky Mountain Research Station. General Technical Report GTR-47 April, 2000.